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ABSTRACT

Conducted to assist vocational educators in planning programs for handicapped students, the project examined selective aspects of the vocational education program, adjustments, and present status of the physically handicapped vocational graduates and the views of the employers and parents towards the training of the graduates. The project was designed to describe the following conditions: the current vocational status of the employed and unemployed physically handicapped in Pennsylvania from 1974-1976 in terms of their vocational adjustment and job satisfaction; the vocational education programs at the area vocational-technical schools and vocational rehabilitation centers for the physically handicapped; parental attitudes towards vocational programs; employer attitudes toward the physically handicapped graduate; vocational programs that would be beneficial to employability for the physically handicapped; and types of special services the physically handicapped might need to succeed in the regular vocational programs in public schools. Three major outcomes were reported: About three-fourths of the vocational handicapped students were placed in regular occupational classes with nonhandicapped students; in most cases, occupational training was not related to the first job; and about 93% of the employers of the physically handicapped reported that they would consider hiring another physically handicapped worker. Data collection instruments are included in the report. (EM)

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1974-76 FOLLOW-UP OF THE PHYSICALLY HANDICAPPED IN PENNSYLVANIA

GOVERNOR'S COMMITTEE
FOR THE PHYSICALLY HANDICAPPED

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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RESEARCH COORDINATING UNIT FOR VOCATIONAL EDUCATION PENNSYLVANIA DEPARTMENT OF EDUCATION

CE 014 573

1974-76 Follow-up of the Physically Handicapped in Pennsylvania

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The purpose of this project was to examine selective aspects of the vocational education program, adjustments and present status of the physically handicapped vocational graduates and the views of the employers and parents towards the training of the graduates.

OBJECTIVES:

I. Describe the current vocational status of the employed and unemployed physically handicapped in Pennsylvania from 1974-1976 in terms of their vocational adjustment and job satisfaction.
II. Describe the vocational education programs at the AVTS and BVR centers for the physically handicapped.
III. Describe parental attitudes towards vocational programs.
IV. Describe the employer attitudes toward the physically handicapped graduate.
V. Identify vocational programs that would be beneficial to the employability for the physically handicapped.
VI. Identify types of special services the physically handicapped might need to succeed in the regular vocational programs at the public school.

OUTCOMES:

1. About three fourths of the vocational handicapped students were placed in regular occupational classes with nonhandicapped students.
2. In most cases, occupational training was not related to the first job.
3. About 93 per cent of the employers of the physically handicapped reported that they would consider hiring another physically handicapped worker.

AUDIENCE:

The resulting information is useful to special educators and program planners for handicapped students.

PUBLICATIONS AND AVAILABLE MATERIALS:

°Final Report
Survey Instruments

1974-76 Follow-up of the Physically Handicapped in Pennsylvania

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ACKNOWLEDGMENTS

As with any undertaking of this size, many individuals and agencies contributed to its accomplishments. However, I wish to acknowledge certain parties because of their special contribution to the study.

First, I extend my appreciation to all of the graduates, their parents, and employers who took time to answer the questionnaires.

Second, I give a special note of thanks to Larry Baughman, Venango County Area Vocational-Technical School, Sandra Tarr, Clarion State College, Liz Barkasy, IU 19, Jerome Kapes, Lehigh University, Ed Lyba IU 29, and Donna Sampsell, IU 16, for their assistance in developing instruments, collecting data, and analyzing the results.

Finally, thanks to the research staff at the Institute for Research on Human Resources, the Penn State University, for their untiring support and assistance.

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BACKGROUND

The Pennsylvania Ad Hoc Committee for the Physically Handicapped and the Bureau of Vocational Education identified one year ago the need for a follow-up study on those handicapped individuals who had been graduated from certain vocational programs in the state. The primary programs identified for study were those programs conducted in Area Vocational-Technical Schools and Comprehensive Schools. The follow-up information contained herein was primarily designed to analyze patterns of work adjustment in order to identify the critical vocational problems facing the young physically handicapped adult and determine their causes.

More specifically the study was designed to describe the current vocational status of the employed and unemployed, physically handicapped in Pennsylvania from 1974 to 1976 in terms of their vocational adjustment and job satisfaction.

To reach this goal vocational education programs at the Area Vocational-Technical Schools and Comprehensive Schools needed to be described. In addition, the attitudes of parents and employers had never been determined before and this study was created to get attitudinal "reading" on these two groups.

The Pennsylvania Department of Education conducts "follow-ups" of the regular and special education graduates in Pennsylvania through a system called VEMIS (Vocational Education Management Information System). The VEMIS System places all the special education graduates into one category, making it impossible to study a particular population. In this report the physically handicapped are being specifically focused upon and the authors of this study feel that the follow-up information contained herein will help to improve program offerings and the employment potential of the physically handicapped.

In October 1976 the Pennsylvania Research Coordinating Unit awarded the Venango County Area Vocational-Technical School a research grant totaling $15,194. The grant was for a 1973-1976 follow-up of physically handicapped graduates in Pennsylvania. At nearly the same time it was learned that the Pennsylvania State University's Institute for Research on Human Resources had received a grant from the United States Office of Education to conduct a similar study. The decision to pool the efforts of the Research Coordinating Unit, Penn State University, and the Venango County Area Vocational-Technical School was made at that time. During the organization and data collection periods of the study a close relationship was

maintained among the aforementioned agencies. This co-operative effort made the study much more comprehensive and valid than it would have been otherwise. The Pennsylvania Department of Education's expertise and communication lines were available. The vast resources of the state's largest University were accessible. The "grass roots" knowledge of the practical application of educational programs for the handicapped was available through the involvement of the Venango County Area Vocational-Technical School.

SUMMARY

The purpose of this study was to examine selective aspects of the vocational education program, adjustments and present status of the physically handicapped vocational graduates and the views of the employers and parents toward the training of the graduates.

The major conclusions derived from this study were:

1. About three-fourths of the vocational handicapped students were placed in regular occupational classes with nonhandicapped students.
2. Most of the handicapped vocational graduates' starting salaries are about the same as the nonhandicapped vocational graduates.
3. In most cases, occupational training was not related to the first job.
4. About 93 percent of the employers of the physically handicapped reported that they would consider hiring another physically handicapped worker.
5. Most of the employers of the physically handicapped indicated that the handicapped workers did not have any problems socially adjusting within the company.
6. Ninety-eight percent of the employers did not have to make architectural changes to accommodate the physically handicapped employers.
7. It was found that business, data processing, distributive education, electronics, food services and communications were beneficial to the employability of physically handicapped vocational graduates.
8. A resource person stationed at the vocational school was successful in coping with educational, social, culture, and physical disabilities of the handicapped.

The recommendations for this study are:

1. The Pennsylvania Department of Education should standardize the admittance of handicapped students into regular vocational programs. A minimum ratio should be set for each program based on the total population served.
2. A school-based job placement service should be made available to all handicapped vocational graduates.
3. The training institutions should look closer at the present and future job market; more emphasis should be placed on designing programs to be more congruent with the job market.
4. More handicapped students should be encouraged to enroll in vocational programs.
5. More career education and pre-vocational programs should be developed specifically for the handicapped.
6. Local employer follow-up should be conducted to gather information on work skills, interpersonal relationships, attendance, attitudes, basic communication and math skills.

INSTRUMENTS

The development and selection of the instruments which were used in this study was decided upon by a group composed of staff from the PA Research Coordinating Unit, Venango AVTS and the Institution for Human Resources, Penn State University. Four basic instruments were developed for the survey procedures. In addition, the Minnesota Satisfaction Survey was used to measure the graduates job satisfaction.

Education History Form

This instrument was designed to be completed by the referring educational institution. Items include a description of programs, number of years enrolled in programs, type of handicap, IQ scores and special services received.

Employer Survey

This survey was designed to be completed by an employer of the physical handicapped. Items pertain to the training of the physical handicapped employee, relationship between the handicapped and adjustment and success on the job.

Parent Follow-Up Survey

This instrument is designed to collect data on parents' attitudes towards the educational programs and especially vocational education.

Minnesota Satisfaction Survey

This scale is to be completed by a worker's supervisor. Comparisons are made between the worker and other workers in the same group on different aspects of job performance.

Career Survey

This instrument was designed to be completed by the graduate. Items are designed to collect data on personal background, post high school experiences, future plans and family information.

Pennsylvania Department of Education
Venango County Area Vocational-Technical School
The Pennsylvania State University

PARTICIPATION FORM

I am willing to take part in a study of the experiences of students after they leave high school. I understand that returning this form does not mean I have to answer the questionnaire. When I receive the questionnaire, I will decide if I want to complete it.

If I do complete the questionnaire, I understand that all my answers will be held in strict confidence and will be used for research purposes only. No information about me will be seen by anyone outside the research staff. The final report will present summaries of all answers and will in no way identify me or any other individual.

Signed Name_____ Date_____

Printed Name_____

Current Address_____
Street

_____
City State Zip

High School_____

Vo-Tech School_____

Are you willing to have your school provide certain information from your school records for this study? The information concerns courses you took, your grades, test scores, and health data.

☐ School may provide this information.

☐ School may <u>not</u> provide this information.

EDUCATIONAL HISTORY FORM

School_____ Code Number of Individual_____

Personal Data

Sex: F M Date of Birth:_____

Race: ☐ White ☐ Black

☐ Hispanic (Puerto Rican, Mexican American) ☐ Other (American Indian, Oriental)

Grade point average_____GPA scale: Grade of A = _____

Date left school _____/_____ ☐ Graduate ☐ Dropout
month year

Did this person have any of the following types of handicaps? (Check all that apply)

☐ Orthopedically handicapped (crippled, missing limb[s])

☐ Neuromuscular problems (cerebral palsy, paraplegia, other)

☐ Partially sighted (eyesight poor even with glasses)

☐ Legally blind

☐ Hard of hearing (mild to moderate hearing loss but can understand speech with difficulty)

☐ Deaf (severe to profound hearing loss)

☐ Speech impaired

☐ Other chronic health problems. Please specify_____

_____

☐ No such handicaps → SKIP to Program Description

Severity of the handicap: (Check as many as apply)

Body Movement Limitations

☐ Nonambulatory, bound to wheelchair regardless of cause

☐ Walks with difficulty or insecurity, such as a person who uses braces and/or crutches, amputees, spastics; may be limited in lifting, stooping, using stairs

☐ No limitations

Manual Limitations

☐ Cannot reach or handle

☐ Can reach or handle with difficulty

☐ No such limitations

Coping in a Public Place

☐ Being in a public place would be insecure and hazardous for the person, due to the handicapping condition

☐ Person could cope, with some difficulty, in a public place

☐ No trouble coping in a public place

Program Description

School program (i.e., vocational, academic, etc.)_____

Name and type of vocational program_____OE Code Number_____

Number of years in vocational program_____Number of hours per week_____

Schedule: ☐ half-day ☐ one-week about ☐ two-week about ☐ other

Was this student involved in any kind of part-time, school-sponsored employment? ☐ No ☐ Yes

☐ Co-op

☐ Work-study

☐ Other _____
(please specify)

A. Placement of student:

☐ Student was placed in regular occupational classes with nonhandicapped students;

☐ Student was placed in separate occupational education classes on a full-time basis;

☐ Student was placed in special classes with other handicapped students part of the time and in regular classes with nonhandicapped students for the remainder;

☐ Other _____

B. Approximately how many students were in this student's occupational education classes (average class size)? _____

C. Was specialized equipment provided for this student in the occupational classes he/she attended? ☐ Yes ☐ No

If yes, what kinds of equipment? _____

_____

_____

D. Please check the kinds of supporting personnel utilized and any special services provided to this student:

Supporting Personnel

☐ Classroom aide
☐ Shop aide
☐ Itinerant teacher
☐ Hearing therapist
☐ Speech therapist
☐ Physical therapist
☐ Occupational therapist
☐ Counselor
☐ Psychologist
☐ Consulting medical specialist
☐ Special placement officer
☐ Other _____
(please specify)

_____

Special Services

☐ Additional basic courses in reading, math, or other courses
☐ Braille or taped texts
☐ Machine reader (opticon)
☐ Testing
☐ Employability skills training
☐ Tutor
☐ Interpreter
☐ Notetaker
☐ Human reader
☐ Mobility guide
☐ Mobility helper
☐ Other _____
(please specify)

_____

Please add any other information you consider pertinent.

The individual named below has indicated that your firm is his/her current (or last) employer.

_____

Please complete the attached questionnaire concerning the job performance of this employee.

To protect the confidentiality of your answers, this individual is identified by the code number on the questionnaire. After completing the questionnaire, please remove this attachment, which identifies the individual, and return the questionnaire in the envelope provided.

If the individual named above is not or has not been an employee of your firm, please check the box below and return the entire form uncompleted.

☐ This individual was never an employee of this firm.

EMPLOYER SURVEY

Code Number of Student_____ Date_____

Number of Employes_____ Number of Physically Handicapped Employes_____

Entry Job_____

1. Was the employe's job reengineered? Yes ( ) No ( ) To what extent? _____

2. What relationship is there between the disability and job employe is performing?

3. Would you consider employing another physically handicapped person? Yes ( ) No ( ) If yes, what kind of job? _____ If no, why not? _____

4. Have you had previous experience with the physically handicapped other than this employe? Yes ( ) No ( ) What? _____

5. Do you employ other handicapped workers? Yes ( ) No ( ) Number_____

6. How did you find this person for employment? (agency, friend, newspaper, school, etc.)_____

7. Do you feel the physically handicapped individual has had a problem socially adjusting within the company? Yes ( ) No ( ) If yes, what steps were taken to help with the problem? _____

8. Did you make any architectural changes to accommodate the physically handicapped employe? Yes ( ) No ( ) If yes, what changes were made? _____

COMMENTS:

The Pennsylvania Department of Education is interested in your feelings concerning your son/daughter's educational program.

Please complete the attached questionnaire concerning your son/daughter's educational program.

To protect the confidentiality of your answers, your son/daughter is identified by the code number on the questionnaire. After completing the questionnaire, please remove this attachment which identifies your son/daughter and return the questionnaire in the envelope provided.

Student's Name_____

PARENT FOLLOW-UP SURVEY

Code Number of Student_____ Date_____

Person Completing Form: ( ) Father ( ) Mother ( ) Guardian ( ) Other

1. What did you like about your son's/daughter's secondary educational program?

2. What did you dislike about your son's/daughter's secondary educational program?

3. Were you ever informed about the educational or vocational programs available to your son/daughter? Yes ( ) No ( ) If yes, who informed you? _____

4. Do you feel your son/daughter had enough information for selecting a senior high program in college prep or vocational education? Yes ( ) No ( ) If yes, explain the type of information received. _____

5. Do you feel your son's/daughter's vocational training in senior high was adequate for today's job market? Yes ( ) No ( ) If yes, explain why you feel training was adequate. _____

If no, explain why you feel it was not adequate. _____

6. Is your son/daughter now self-supportive? Yes ( ) No ( ) If no, explain why.

7. Do you feel there is a need for follow-up services to help your son/daughter to advance and obtain a better job? Yes ( ) No ( ) If yes, what type of services should be given? _____

COMMENTS:

Code Number of Student_____ Date_____

EMPLOYEE PERFORMANCE SURVEY

DIRECTIONS: Please indicate your satisfaction with the employee as compared with other workers in the same work group. If the worker is the only person employed with your firm, compare him with others who have worked in the same position. This information will be kept strictly confidential. Please respond to all questions.

I. Total number of *months* employee has been employed by your firm ... ☐☐ (13-14)

PLEASE RESPOND TO THE FOLLOWING QUESTIONS BY PLACING AN "X" IN THE APPROPRIATE SQUARE

II. In comparison with other workers in the same work group, how would you rate the employee on each of the following characteristics?

	above average	about average	below average	
1. The quality of employee's work	1	2	3	(15)
2. The quantity of employee's work	1	2	3	(16)
3. The degree to which the employee possesses specific job-related knowledge important to success on this job	1	2	3	(17)
4. The degree to which the employee is able to operate the equipment and apparatus used on the job	1	2	3	(18)
5. The degree to which the employee possesses basic reading, verbal and computational skills	1	2	3	(19)

III. In comparison to others in the employee's work group, how would you rate the employee on each of the following characteristics?

	above average	about average	below average	
1. Willingness to accept responsibility	1	2	3	(20)
2. Punctuality	1	2	3	(21)
3. Ability to work without supervision	1	2	3	(22)
4. Willingness to learn and improve	1	2	3	(23)
5. Cooperation with co-workers	1	2	3	(24)
6. Cooperation with management	1	2	3	(25)
7. Compliance with company policies, rules, and practices	1	2	3	(26)
8. Work attendance	1	2	3	(27)

IV. In comparison with other workers in the same work group, how would you rate the employee's over-all competency, effectiveness, proficiency, general over-all work attitudes, and other elements of successful job performance?

(28)

☐1 In the top 1/4

☐2 In the top 1/2 but not among the top 1/4

☐3 In the bottom 1/2 but not among the lowest 1/4

☐4 In the lowest 1/4

CODE NUMBER _____ [Card 1 2-5]

CONFIDENTIAL: FOR RESEARCH USE ONLY

CAREER SURVEY

being conducted by –

Research Coordinating Unit
Pennsylvania Department
of Education

Venango County Area
Vocational-Technical
School

Institute for Research
on Human Resources
The Pennsylvania State
University

DIRECTIONS: THIS QUESTIONNAIRE IS ABOUT YOUR HIGH SCHOOL EDUCATION AND YOUR EXPERIENCES SINCE LEAVING HIGH SCHOOL.

MOST QUESTIONS CAN BE ANSWERED BY PUTTING AN "X" OR CHECKMARK (✓) IN THE BOX THAT BEST REFLECTS YOUR OWN EXPERIENCE OR ATTITUDES. THE SMALL NUMBERS BY THE BOXES ARE FOR COMPUTER USE IN TALLYING YOUR ANSWERS. YOU DO NOT HAVE TO PAY ANY ATTENTION TO THEM.

YOU MAY DECLINE TO ANSWER ANY QUESTION.

BACKGROUND INFORMATION

1. WHAT IS YOUR DATE OF BIRTH? _____ [6-7]

2. WHAT IS YOUR SEX? [8] ☐ 1 MALE ☐ 2 FEMALE

3. ARE YOU--

[9] ☐ 1 SINGLE ☐ 2 MARRIED ☐ 3 DIVORCED, SEPARATED, WIDOWED

4. DO YOU HAVE ANY CHILDREN? [10] ☐ 1 YES ☐ 2 NO

   A. PLEASE LIST THEIR AGES: [11] _____

5. DO YOU HAVE A DRIVER'S LICENSE? [12] ☐ 1 YES ☐ 2 NO

6. DO YOU HAVE ANY OF THE FOLLOWING TYPES OF HANDICAPS (CHECK ALL THAT APPLY)

[13] ☐ 1 ORTHOPEDICALLY HANDICAPPED (CRIPPLED, MISSING LIMB[S])

[14] ☐ NEUROMUSCULAR PROBLEMS (CEREBRAL PALSY, PARAPLEGIA, OTHER)

[15] ☐ PARTIALLY SIGHTED (EYESIGHT POOR EVEN WITH GLASSES)

[16] ☐ LEGALLY BLIND

[17] ☐ HARD OF HEARING (MILD TO MODERATE HEARING LOSS BUT CAN UNDERSTAND SPEECH WITH DIFFICULTY)

[18] ☐ DEAF (SEVERE TO PROFOUND HEARING LOSS)

[19] ☐ SPEECH IMPAIRED (OTHERS HAVE DIFFICULTY UNDERSTANDING YOU)

[20] ☐ OTHER CHRONIC HEALTH PROBLEMS. PLEASE SPECIFY_____

_____

[21] ☐ NO SUCH HANDICAPS → SKIP TO QUESTION 7

A. DURING THE YEARS YOU WERE IN SCHOOL, DID YOU RECEIVE ANY INSTRUCTION OR TRAINING OUTSIDE OF SCHOOL TO HELP YOU WITH YOUR HANDICAP?

[22] ☐ 1 YES ☐ 2 NO → SKIP TO QUESTION 7

B. WHAT KIND OF INSTRUCTION OR TRAINING? _____

_____

_____

_____

_____ [23-25]

C. HOW MANY YEARS DID YOU RECEIVE THIS HELP OUTSIDE OF SCHOOL?

[26]

1 ☐ 1 YEAR OR LESS

2 ☐ 2-3 YEARS

3 ☐ 4-5 YEARS

4 ☐ 6-7 YEARS

5 ☐ 8-9 YEARS

6 ☐ 10 YEARS OR MORE

7. DID YOU EVER HOLD A PART-TIME JOB WHILE YOU WERE IN HIGH SCHOOL?

[27] 1 ☐ YES 2 ☐ NO → SKIP TO QUESTION 8

A. WHAT KIND OF JOB(S) DID YOU HOLD?

_____

_____ [28-31]

B. HOW MANY TOTAL MONTHS DID YOU WORK AT THESE JOBS?

_____ MONTHS [32-33]

C. WERE ANY OF THESE JOBS CO-OP, WORK EXPERIENCE, OR WORK-STUDY JOBS (PART-TIME SCHOOL AND PART-TIME WORK)?

[34] 1 ☐ YES 2 ☐ NO

D. DID YOU CONTINUE WITH ANY EMPLOYER YOU WORKED FOR IN HIGH SCHOOL AFTER YOU LEFT SCHOOL?

[35] 1 ☐ YES 2 ☐ NO → SKIP TO QUESTION 8

E. ARE YOU STILL WORKING FOR THIS EMPLOYER?

[36] 1 ☐ YES 2 ☐ NO → F. HOW LONG DID YOU STAY WITH THIS EMPLOYER?

____YEARS ____MONTHS [37-38]

8. OF ALL THE JOBS YOU COULD PERFORM SUCCESSFULLY, WHAT KIND WOULD YOU MOST LIKE TO HAVE? _____

_____

_____ [39-40]

A. DID YOUR HIGH SCHOOL ATTEMPT TO PREPARE YOU FOR THIS KIND OF JOB?

[41]

1 ☐ I WAS NOT INTERESTED IN THIS JOB WHILE IN HIGH SCHOOL

2 ☐ SCHOOL WAS NOT ABLE TO PREPARE ME FOR THIS JOB

3 ☐ SCHOOL GAVE ME SOME PREPARATION

4 ☐ SCHOOL GAVE ME GOOD PREPARATION

9. DID YOU EVER THINK SERIOUSLY ABOUT LEAVING HIGH SCHOOL BEFORE GRADUATION?

[42] ☐ 1 YES ☐ 2 NO → SKIP TO QUESTION 10

A. WHAT WERE YOUR MAIN REASONS?

_____

_____

_____

_____ [43-44]

B. DID YOU LEAVE BEFORE GRADUATION?

[45] ☐ 1 YES ☐ 2 NO

C. WHAT CAUSED YOU TO STAY IN SCHOOL? (CHECK AS MANY AS APPLY)

[46] ☐ 1 PARENT WOULD NOT LET ME LEAVE

[47] ☐ TALKED WITH COUNSELOR, TEACHERS, OTHER SCHOOL STAFF

[48] ☐ TALKED WITH FRIENDS

[49] ☐ TOOK COURSES THAT TRAINED ME TO GET A JOB

[50] ☐ GRADES IMPROVED

[51] ☐ REALIZED VALUE OF EDUCATION

[52] ☐ PERSONAL DESIRE TO FINISH SCHOOL

[53] ☐ OTHER (WHAT?)_____

_____

_____

POST-HIGH SCHOOL EXPERIENCES

10. WHAT MONTH AND YEAR DID YOU GRADUATE (OR LEAVE) HIGH SCHOOL?
MONTH _____ YEAR _____ [54-55]

11. HOW MANY DIFFERENT FULL-TIME JOBS (30 HOURS OR MORE A WEEK) HAVE YOU HELD SINCE YOU LEFT HIGH SCHOOL?

_____ JOBS [56]

12. PLEASE LIST BELOW A. THE NUMBER OF MONTHS YOU WORKED FULL-TIME (30 HOURS OR MORE A WEEK), B. THE NUMBER OF MONTHS YOU WORKED PART-TIME (LESS THAN 30 HOURS A WEEK), AND C. THE NUMBER OF MONTHS YOUR WERE NOT WORKING. PLEASE REPORT THESE FOR THE YEAR YOU LEFT HIGH SCHOOL AND FOR EACH YEAR THROUGH 1976.

YEAR	A. MONTHS EMPLOYED FULL-TIME (30 HOURS OR MORE A WEEK)	B. MONTHS EMPLOYED PART-TIME (LESS THAN 30 HOURS A WEEK)	C. MONTHS NOT WORKING
1973	_____ [57-58]	_____ [59-60]	_____ [61-62]
1974	_____ [63-64]	_____ [65-66]	_____ [67-68]
1975	_____ [69-70]	_____ [71-72]	_____ [73-74]
1976	_____ [75-76]	_____ [77-78]	_____ [79-80]

[Card 2 2-5]

13. SINCE YOU LEFT HIGH SCHOOL, HOW MANY MONTHS HAVE YOU --

	MONTHS
A. ATTENDED SCHOOL OR COLLEGE FULL-TIME?	_____ [6-7]
B. NOT HAD A JOB BECAUSE YOU WERE KEEPING HOUSE?	_____ [8-9]
C. BEEN UNABLE TO WORK DUE TO SICKNESS, INJURY, OR HANDICAP?	_____ [10-11]
D. BEEN ON ACTIVE DUTY WITH MILITARY?	_____ [12-13]

14. PLEASE ANSWER THE QUESTIONS LISTED BELOW (A THROUGH I) FOR EACH OF THESE JOBS. → FIRST, ANSWER ALL THE QUESTIONS FOR YOUR FIRST JOB, THEN FOR YOUR CURRENT (OR LAST) JOB. RECORD ANSWERS ON RIGHT HAND PAGE.

(14) ☐ 1 HAVE NEVER HELD A REGULAR JOB → SKIP TO QUESTION 15.

A. WHAT IS THIS JOB? WHAT ARE ITS MAIN TASKS?

B. WHAT DOES THE EMPLOYER YOU WORKED FOR MAKE OR DO?

C. WHAT MONTH AND YEAR DID YOU START AND LEAVE THIS JOB?

D. HOW DID YOU FIND OUT THIS JOB WAS AVAILABLE?

E. WHAT WAS YOUR TOTAL STARTING AND LEAVING (OR CURRENT) WAGE OR SALARY BEFORE ANY DEDUCTIONS FOR TAXES, SOCIAL SECURITY, ETC.? IF YOU RECEIVED TIPS OR OTHER PAY, ESTIMATE WHAT YOU AVERAGED.

F. HOW MANY HOURS A WEEK DO (DID) YOU USUALLY WORK?

G. HOW RELATED IS (WAS) THIS JOB TO THE OCCUPATIONAL AREA YOU STUDIED IN HIGH SCHOOL?

☐ 9 DID NOT STUDY AN OCCUPATIONAL AREA IN HIGH SCHOOL

H. HOW WELL DID YOUR HIGH SCHOOL TRAINING PREPARE YOU FOR THIS JOB?

☐ 9 HIGH SCHOOL COURSES DID NOT INCLUDE TRAINING FOR JOBS

I. OVERALL, HOW SATISFIED ARE (WERE) YOU WITH THIS JOB? HOW WELL DO (DID) YOU LIKE IT?

FIRST REGULAR JOB AFTER HIGH SCHOOL	CURRENT OR LAST JOB
(ONE YOU EXPECTED TO KEEP, NOT A SEASONAL OR PART-TIME JOB,) ANSWER ALL QUESTIONS IN THE SPACES BELOW.	IF THIS JOB IS THE SAME AS YOUR FIRST JOB, SKIP THIS COLUMN.
[15-16]	[33-34]
[17-18]	[35-36]
START: MO_____ YR_____ [19 20] LEAVE: MO_____ YR_____ [21 22]	START: MO_____ YR_____ [37-38] LEAVE: MO_____ YR_____ [39 40]
[23]	[41]
STARTING: $_____ [24-25] HR/WEEK/MONTH (CIRCLE ONE) LEAVING: $_____ [26-27] (OR CURRENT) HR/WEEK/MONTH	STARTING: $_____ [42-43] HR/WEEK/MONTH (CIRCLE ONE) LEAVING: $_____ [44 45] (OR CURRENT) HR/WEEK/MONTH
_____ HOURS PER WEEK [28-29]	_____ HOURS PER WEEK [46-47]
[30] 1 ☐ SAME AS AREA 2 ☐ HIGHLY RELATED 3 ☐ SLIGHTLY 4 ☐ NOT AT ALL	[48] 1 ☐ SAME AS AREA 2 ☐ HIGHLY RELATED 3 ☐ SLIGHTLY 4 ☐ NOT AT ALL
[31] 1 ☐ EXCELLENT PREPARATION 2 ☐ GOOD PREPARATION 3 ☐ FAIR PREPARATION 4 ☐ POOR PREPARATION	[49] 1 ☐ EXCELLENT PREPARATION 2 ☐ GOOD PREPARATION 3 ☐ FAIR PREPARATION 4 ☐ POOR PREPARATION
[32] 1 ☐ VERY SATISFIED 2 ☐ SATISFIED 3 ☐ DISSATISFIED 4 ☐ VERY DISSATISFIED	[50] 1 ☐ VERY SATISFIED 2 ☐ SATISFIED 3 ☐ DISSATISFIED 4 ☐ VERY DISSATISFIED

15. PLEASE LIST BELOW A. YOUR ANNUAL EARNING FROM WAGES AND SALARIES (BEFORE ANY DEDUCTION) AND B. ANY OTHER INCOME (UNEMPLOYMENT INSURANCE, WELFARE PAYMENTS, MONEY FROM PARENTS, INTEREST ON SAVINGS, ETC.). PLEASE REPORT THESE FOR THE YEAR YOU LEFT HIGH SCHOOL AND FOR EACH YEAR THROUGH 1976.

YEAR	A. WAGES, SALARIES	B. ANY OTHER INCOME
1973	$_____ [51-55]	$_____ [56-59]
1974	$_____ [60-64]	$_____ [65-68]
1975	$_____ [69-73]	$_____ [74-77]
1976	$_____ [6-10] (Card 3 2-5)	$_____ [11-14]

16. WHO IS YOUR CURRENT OR LAST EMPLOYER? PLEASE ENTER THE NAME AND ADDRESS OF THIS EMPLOYER. (IF YOU DO NOT WANT US TO CONTACT YOUR EMPLOYER, LEAVE THIS QUESTION BLANK.)

EMPLOYER _____

_____

ADDRESS _____

_____

17. DID YOU EVER TAKE ANY EDUCATIONAL OR TRAINING PROGRAMS AFTER HIGH SCHOOL TO HELP YOU FIND A JOB OR PREPARE FOR A BETTER JOB?

[15] ☐ 1 YES ☐ 2 NO → SKIP TO QUESTION 18

A. WHAT DID THE PROGRAM TRAIN OR PREPARE YOU FOR?

_____

_____ [16-17]

B. HOW RELATED WAS THIS PROGRAM TO THE COURSES YOU STUDIED IN HIGH SCHOOL?

[18]
1 ☐ SAME AS COURSES STUDIED
2 ☐ HIGHLY RELATED
3 ☐ SLIGHTLY RELATED
4 ☐ NOT AT ALL RELATED

C. HOW LONG IS (WAS) THE PROGRAM?

_____ [19-20] WEEKS/MONTHS/YEARS (CIRCLE ONE)

D. DID YOU COMPLETE IT?

[21] ☐ 1 YES ☐ 2 NO ☐ 3 STILL ATTENDING

E. WHERE DID YOU TAKE THE TRAINING?

[22]
1 ☐ EMPLOYER, PLACE OF WORK
2 ☐ REHABILITATION CENTER
3 ☐ SHELTERED WORKSHOP
4 ☐ COMMUNITY, 2-YEAR COLLEGE
5 ☐ 4-YEAR COLLEGE OR UNIVERSITY
6 ☐ PRIVATE BUSINESS OR TECHNICAL SCHOOL
7 ☐ AREA VOCATIONAL-TECHNICAL SCHOOL
8 ☐ OTHER (WHERE?) _____

_____

FUTURE PLANS

18. WHAT DO YOU THINK YOU WILL BE DOING ONE YEAR FROM NOW?

☐ WORKING → WHAT KIND OF JOB?

_____ [23 24]

☐ ATTENDING SCHOOL, COLLEGE → WHAT WILL YOU BE STUDYING? _____

_____ [25 26]

[27] ☐ IN MILITARY SERVICE

[28] ☐ KEEPING HOUSE

[29] ☐ OTHER (WHAT?) _____

[30] ☐ UNDECIDED, DON'T KNOW

A. HOW RELATED ARE THESE PLANS TO THE COURSES YOU STUDIED IN HIGH SCHOOL?

[31]

1 ☐ PLANS ARE IN SAME AREAS AS COURSES STUDIED

2 ☐ PLANS ARE HIGHLY RELATED

3 ☐ PLANS ARE SLIGHTLY RELATED

4 ☐ PLANS ARE NOT AT ALL RELATED

19. TAKING ALL THINGS TOGETHER, HOW WOULD YOU SAY THINGS ARE THESE DAYS - WOULD YOU SAY YOU ARE:

[32]

1 ☐ VERY HAPPY

2 ☐ QUITE HAPPY

3 ☐ A LITTLE HAPPY

4 ☐ NOT TOO HAPPY

FAMILY INFORMATION

20. APPROXIMATELY WHAT IS THE CURRENT ANNUAL INCOME OF BOTH YOUR PARENTS, BEFORE DEDUCTIONS FOR TAXES, SOCIAL SECURITY, ETC.? [33]

1 ☐ $5,000 PER YEAR OR LESS

2 ☐ $5,001 TO $10,000 PER YEAR

3 ☐ $10,001 TO $15,000 PER YEAR

4 ☐ $15,001 TO $20,000 PER YEAR

5 ☐ $20,001 PER YEAR OR MORE

6 ☐ I DON'T KNOW

21. WHAT IS THE HIGHEST LEVEL OF EDUCATION YOUR FATHER (OR MALE HEAD OF HOUSEHOLD) AND MOTHER (OR FEMALE HEAD) COMPLETED?

	FATHER [34]	MOTHER [35]
1	☐	☐ NONE, OR SOME GRADE SCHOOL
2	☐	☐ COMPLETED GRADE SCHOOL, 6TH GRADE
3	☐	☐ SOME HIGH SCHOOL (7-12), BUT NOT A GRADUATE
4	☐	☐ GRADUATED FROM HIGH SCHOOL
5	☐	☐ VOCATIONAL OR BUSINESS SCHOOL AFTER HIGH SCHOOL
6	☐	☐ SOME COLLEGE, BUT NOT A GRADUATE
7	☐	☐ GRADUATED FROM REGULAR 4-YEAR COLLEGE OR MORE
8	☐	☐ I DON'T KNOW

22. PLEASE CHECK THE KIND OF JOB YOUR FATHER AND MOTHER WORKED AT WHILE YOU WERE GOING TO HIGH SCHOOL.

	FATHER [36]	MOTHER [37]	
1	☐	☐	PROFESSIONAL, TECHNICAL MANAGERIAL, OWNER OF OWN BUSINESS (FOR EXAMPLE, DOCTOR, TEACHER, ENGINEER, PLANT MANAGER)
2	☐	☐	SALES, CLERICIAL WORKER (FOR EXAMPLE, STORE CLERK, SECRETARY, POSTAL CLERK)
3	☐	☐	SKILLED WORKER, FOREMAN (FOR EXAMPLE, PLANT SUPERVISOR, MECHANIC, CARPENTER, PRINTER)
4	☐	☐	SEMISKILLED AND LABORER (FOR EXAMPLE, FACTORY WORKER, TRUCK DRIVER)
5	☐	☐	SERVICE AND PROTECTIVE WORKER (FOR EXAMPLE, BARBER, WAITER, FIREMAN, PRACTICAL NURSE)
6	☐	☐	OTHER (PLEASE SPECIFY) _____
7	☐	☐	FATHER/MOTHER DID NOT WORK OUTSIDE THE HOME
8	☐	☐	THERE WAS NO FATHER/MOTHER IN HOME WHILE I WAS IN HIGH SCHOOL
9	☐	☐	I DON'T KNOW

23. PLEASE ENTER ANY ADDITIONAL COMMENTS OR SUGGESTIONS.

_____

_____

_____

_____

_____

_____

_____ [38-41]

THANK YOU

PLEASE RETURN QUESTIONNAIRE IN THE ENVELOPE PROVIDED.

PROCEDURES

Population

The population for this study was normal physical handicapped young adults who were residents of Pennsylvania and graduates from Pennsylvania vocational education institutions from 1973-76 who met the following criteria: obtained an I.Q. score of 80 or above on standardized intelligence tests; presented no diagnosed psychosis and can be placed in one or more of the classifications of the physically handicapped:

- o Orthopedically handicapped
- o Neuromuscular problems
- o Partially sighted
- o Legally blind
- o Hard of hearing
- o Deaf
- o Speech impaired
- o Other chronic health problems

The control pop ulation for this study were physically handicapped academic graduates who met the same criteria and regular vocational graduates with no physical handicap.

Sample

Initial referrals for the follow-up were obtained from Pennsylvania vocational school, intermediate units, and approved private schools. Each educational institution was contacted by mail for its participation and assistance on the project. In addition, on-site meetings were held with institutions that indicated they graduate a substantial number of physical handicapped students. The educational agencies were requested to obtain permission from graduates and parents to be interviewed by the project staff. Table 1 presents the responses received from the mailings of the release forms.

TABLE 1

Response Rates to Mailings of Release Forms.

Type of Schools Participating	Number of Schools	Number of Release Forms					Percent Returned	
		Mailed by Schools Initially	Undeliverable	Returned Completed* 1st Mailing	Returned Completed* 2nd Mailing**	Returned Completed* Total	Total Sample	Minus Undeliverable
Vocational Technical	40	523[a] 64[b]	35	129[d]	73[e]	202	% 34	% 36
Comprehensive	38	145[a] 144[c]	10	109	41[f]	150	52	54
Approved Private	5	441[a]	15	97	53	150	34	35
Total	83	1317	60	335	167	502	39	40

(Continued from Table 1).

* These figures are not separated on the basis of handicapped/nonhandicapped or vocational/nonvocational. The schools did not release health or program data initially, and the release forms gave no indication of whether the respondent had a physical handicap or had taken a vocational program.

**A dime was enclosed as a response incentive in the second mailing.
[a]These were sent to physically handicapped vocational individuals.
[b]These were sent to nonhandicapped vocational individuals.
[c]These were sent to physically handicapped nonvocational individuals.
[d]Includes 15 forms received from HS students invited to participate by mistake.
[e]Includes 3 forms received from HS students invited to participate by mistake.
[f]Includes 1 form received from HS student invited to participate.

Table 1 shows a total of 1,317 release forms were mailed by the participating schools. After the second mailing a total of 502 or 39 percent of the release forms were returned. The comprehensive schools' return rate was 52 percent and the vocational-technical and approved private schools' rate each were 34 percent.

Data Collection

Table 2 shows the number of Career Surveys sent and the number of completed as a result of each of the two mailings and telephone follow-ups. A total of 403 or 81 percent of the Career Surveys were returned by the graduates after the second mailing and telephone interviews.

After a completed Career Survey was returned and only if the graduate had authorized the school to do so (on the release form) was the school asked to provide information from the student's file. This information was collected on an Educational History Form (See Appendix). Also the employers were only contacted after the student had authorized the project staff to do so (See Itm 16 on the Career Survey in the Appendix).

Table 2

Response Rates to Mailings of Questionnaires.

Type of Schools	Number of Questionnaires Mailed By PSU*	Returned Completed 1st Mailing	2nd Mailing	Telephone	Total	Percent Completed
Vocational Technical	198	115	26	15	156	% 79
Comprehensive	150	116	5	9	130	87
Approved Private	150	79	37	1	117	78
Total	498	310	68	25	403	81

Table 3 shows the number of graduates, parents and employers who completed the survey forms and the number of Educational History Forms completed by the participating institutions. The number of respondents to each item on the survey forms varies to some extent making some totals different.

TABLE 3

Summary of Forms Completed by the Respondents.

Form	Number
Educational History Form	413
Career Survey	403
Parent Follow-Up Summary	120
Employer Survey	77
Minnesota Satisfaction Survey	77

Description of the Sample

Table 4 summarizes the type of physical handicap of the graduates. A total of 187 males and 124 females made up the sample of handicappes graduates. The largest handicapped group was the multiple handicapped (24.8 per cent of the sample) followed by "other" type of handicapped with 21.9 per cent. The hard of hearing and deaf made up 21.9 per cent, orthopedically handicapped 13.8 per cent, partially sighted 10 per cent, neuromuscular problems 5.5 per cent and speech impaired 2.3 per cent. It should be noted that none of the sample were legally blind.

TABLE 4

Type of Physical Handicap by Sex.

Type of Handicap	Female		Male		Total	
	N	%	N	%	N	%
Orthopedically handicapped	21	16.9	22	11.8	43	13.8
Neuromuscular problem	8	6.5	9	4.8	17	5.5
Partially sighted	11	8.9	20	10.7	31	10.0
Legally blind	0	0	0	0	0	0
Hard of Hearing	8	6.5	14	7.5	22	7.1
Deaf	16	12.9	30	16.0	46	14.8
Speech impaired	1	.8	6	3.2	7	2.3
Other	26	21.0	42	22.5	68	21.9
Multiply handicapped	33	26.6	44	23.5	77	24.8
TOTAL	124	-	187	-	311	-

Table 5 compares the intelligence classification of the sample. The I.Q. scores were taken from 13 different tests. For purposes of this table, it was assumed that the range of scores were comparable. The range of scores varied to some extent within each of the subsamples. In general, the I.Q. scores of the sample were very similiar to a normal population.

TABLE 5

Intelligence Classifications

Range of IQ	Nonhandicapped Vocational		Handicapped Vocational		Handicapped Academic	
	N	%	N	%	N	%
130 & above	1	2.0	1	0.9	3	3.3
120-129	5	10.2	7	6.6	15	16.3
110-119	16	32.7	19	12.9	25	27.2
90-109	23	46.9	59	55.7	38	41.3
80-89	3	6.1	16	15.1	6	6.5
70-79	1	2.0	3	2.8	2	2.2
69 & below	0	0.0	1	0.9	3	3.3
Base Number	49	-	106	-	92	-

Source: Educational Histroy Form (N=301). I.Q. scores were taken from 13 different tests. For purposes of this table, it was assumed that the scores were comparable.

Note: Excluded from Table 5 are:
23 with missing Handicap/Nonhandicap or Vocational/Academic Classification;
28 with missing intelligence classification; and 3 who are Nonhandicapped Academic.

Table 6 shows that 43.1 percent of the graduates were in trade and industry programs, followed by 14.4 percent in home economics, 13.8 percent in technical, 8.8 percent in business and office, 6.9 percent in agriculture and health and 6.3 percent in distributive education.

Note: Excluded from Table 6 are:
94 who are Handicapped Academic; 3 who are Nonhandicapped Academic; 23 with missing Handicap/Nonhandicap or Vocational/Academic Classification; and 23 with missing Vocational program.

TABLE 6

Type of Vocational Program

Vocational Program	Nonhandicapped Vocational		Handicapped Vocational		Total	
	N	%	N	%	N	%
Business, office	9	17.6	5	4.6	14	8.8
Distributive Ed.	4	7.8	6	5.5	10	6.3
Health	3	5.9	8	7.3	11	6.9
Home Economics	9	17.6	14	12.8	23	14.4
Trade & Industry	18	35.3	51	46.8	69	43.1
Technical	5	9.8	17	15.6	22	13.8
Agriculture	3	5.9	8	7.3	11	6.9
TOTAL	51	-	109	-	160	-

FINDINGS

The results reflect outcomes as they relate to each of the six objectives.

OBJECTIVE I. Describe the current vocational status of the employed and unemployed physically handicapped in Pennsylvania from 1974-76 in terms of their vocational adjustment and job satisfaction.

The following research questions were formulated to collect data for Objective I.

1. What were the in-school work and co-op experiences of the graduates?
2. What are the effects of work experiences on students' job success?
3. What are the post high school educational and job experiences of the graduates?
4. What are the future plans of the graduates?

The results reflect outcomes as they relate to each of the research graduates.

Question 1. What were the in-school work and co-op experiences of the graduates?

Career Survey Item 7 was used to answer question 1.

An inspection of Table 7 indicates that only 66 graduates surveyed were in the school-sponsored jobs. A total of 75.7 per cent of the handicapped vocational graduates were in co-op programs and 21.6 per cent were in work study programs. As expected the handicapped academic graduates were not in any school-sponsored jobs. Almost 86 per cent of the nonhandicapped vocational graduates said they were in co-op programs.

TABLE 7

Part-time Jobs Held in High School

Type of School-Sponsored Job	Handicapped Vocational		Handicapped Academic		Nonhandicapped Vocational		Total	
	N	%	N	%	N	%	N	%
Coop	28	75.7	0	0	24	85.7	52	78.8
Work-Study	8	21.6	1	100	1	3.6	10	15.2
Other	1	2.7	0	--	3	10.7	4	6.1
TOTAL	37	--	1	--	28	--	66	--

Based on the data collected on the educational form, it was reported in Table 7A that 72.5 per cent of the physically handicapped were placed in regular occupational classes with nonhandicapped students. Approximately 17 per cent were placed in separate occupational educational classes on a full-time basis. The remaining group were placed in other types of class setting.

TABLE 7A

Type of Vocational Placement for the Physically Handicapped

Type of Placement	N	%
Student was placed in regular occupational classes with nonhandicapped students	177	72.5
Student was placed in separate occupational education classes on a full-time basis	38	15.6
Student was placed in special classes with other handicapped students part of the time and in regular classes with nonhandicapped students for the remainder	1	0.4
Other	28	11.5
TOTAL	244	--

The data in table 7B compares the number of students that held part-time jobs while in high school. It was found that approximately 49 per cent of the handicapped vocational and 1/4 of the nonhandicapped vocational and handicapped academic graduates held part-time jobs while in high school.

TABLE 7B

Did You Ever Hold a Part-Time Job While in High School?

Type of Student	Yes		No	
	N	%	N	%
Handicapped-Vocational	86	48.9	42	43.9
Handicapped-Academic	44	25.0	50	52.1
Nonhandicapped Vocational	46	26.1	4	4.2
TOTAL	176	--	96	--

Question 3. What are the post high school educational and job experiences of the graduates?

Career Survey item 13 and 14 was used to answer question 3.

The data shown on Table 8A compares the first full-time job of the graduates to the Vocational Education related occupational code. It was found that the trade and industrial category was ranked first by all the graduates. Business and Office was ranked second by handicapped vocational and third by the handicapped vocational. Almost 19 percent of the jobs indicated by the graduates were unclassifiable. This was probably due to the wrong job titles given by the graduates. It should also be noted that across all the job codes the graduates were about equal in ranking with the exception of home economics for the nonhandicapped vocational graduates.

TABLE 8A

First Regular Full-Time Job Experience

First Full-Time Job*	Handicapped Vocational		Handicapped Academic		Nonhandicapped Vocational		Total	
	N	%	N	%	N	%	N	%
Occupations not directly related to specific vocational areas	4	3.8	2	4.7	3	7.0	9	4.7
Business, Office	19	18.1	4	9.3	5	11.6	28	14.7
Distributive Ed.	12	11.4	7	16.3	6	14.0	25	13.1
Health	4	3.8	1	2.3	0	0.0	5	2.6
Home Economics	8	7.6	3	7.0	10	23.3	21	11.0
Trade & Indust.	33	31.4	7	16.3	14	32.6	54	28.3
Technical	7	6.7	1	2.3	1	2.3	9	4.7
Agriculture	2	1.9	1	2.3	1	2.3	4	2.1
Unclassifiable	16	15.2	17	8.9	3	1.6	36	18.8
TOTAL	105	--	43	--	43	--	191	--

*Job classified according to VEROC (Vocational Education Related Occupational Code).

All of the graduates were asked, "how did you find out this job was available?" Table 8D indicates that 28.4 percent of the handicapped vocational, 51.4 percent of the handicapped academic and 27 percent of the nonhandicapped vocational stated that personal contact was the source of how they found out about their job. A total of 12.5 percent of the handicapped vocational, 11.4 percent of the handicapped academic and 10.8 percent of the nonhandicapped vocational indicated that the source of finding out about their job was through personal job search. 30.7 percent of the handicapped vocational, 2.9 percent of the handicapped academic and 32.4 percent of the nonhandicapped vocational

stated that the source for finding out about their job was through the school. 4.5 percent of the handicapped vocational, 8.6 percent of the handicapped academic and 2.7 percent of the nonhandicapped vocational indicated that the source for finding their job was through the employment office.

If should be noted that less than 2.7 percent of all the graduates found out about their job through the local military recruiter. Due to the physical handicapped conditions of the graduates, a low percentage in this area was expected for handicapped students. It should also be noted that less than 1 percent of the handicapped vocational and academic graduates found out about their jobs through vocational rehabilitation counselors. In summary, 53.7 percent or the majority of all the graduates found out about their jobs on their own through personal contacts and personal job searches.

TABLE 8D

Source of Learning About First Full-Time Job

	Handicapped Vocational		Handicapped Academic		Nonhandicapped Vocational		Total	
Source	N	%	N	%	N	%	N	%
Personal Contact	25	28.4	18	51.4	10	27.0	53	33.1
Advertisements	11	12.5	4	11.4	4	10.8	19	11.9
Personal Job Search	17	19.3	9	25.7	7	18.9	33	20.6
School	27	30.7	1	2.9	12	32.4	40	25.0
Employment Office	4	4.5	3	8.6	1	2.7	8	5.0
Rehab. Center or Counselor	1	1.1	0	0.0	0	0.0	1	0.6
Military Recruiter	0	0.0	0	0.0	1	2.7	1	0.6
Other	3	3.4	0	0.0	2	5.4	5	3.1
TOTAL	88	--	35	--	37	--	160	--

The starting salary for the first regular full-time job for the 1976 graduates surveyed showed that almost half 47.2 earned less than $400, while 25 percent earned from $400 to $499 per month. Table 8E also shows that only 5.7 percent of the graduates earned $800 or more per month. It was noted that most of the handicapped vocational graduates earn about the same as the nonhandicapped vocational graduates.

TABLE 8E

Starting Salary for First Regular Full-Time Job

Starting Salary Per Month*	Handicapped Vocational		Handicapped Academic		Nonhandicapped Vocational		Total	
	N	%	N	%	N	%	N	%
Below $400	11	45.8	6	50.0	8	47.1	25	47.2
$400-449	3	12.5	1	8.3	3	17.6	7	13.2
$450-499	4	16.7	0	0.0	4	23.5	8	15.1
$500-549	1	4.2	1	8.3	2	11.8	4	7.5
$550-599	1	4.2	1	8.3	0	0.0	2	3.8
$600-649	1	4.2	0	0.0	0	0.0	1	1.9
$650-699	1	4.2	0	0.0	0	0.0	1	1.9
$700-749	1	4.2	0	0.0	0	0.0	1	1.9
$750-799	0	0.0	1	8.3	0	0.0	1	1.9
$800 or more	1	4.2	2	16.7	0	0.0	3	5.7
TOTAL	24	--	12	--	17	--	53	--

* Only for 1976 graduates.

The graduates were asked the relationship between occupational training and first regular full-time job. An inspection of Table 8G shows that in most cases occupational training was not at all related to first regular full-time job. A total of 52 percent of handicapped vocational, 40.5 percent of handicapped academic and 53.7 percent of nonhandicapped vocational training was not related. It should be noted that 50 percent of handicapped academic did not study an occupational area in high school.

TABLE 8G

Relationship Between Occupational Training and First Regular Full-Time Job

Ratings of Relatedness	Handicapped Vocational		Handicapped Academic		Nonhandicapped Vocational		Total	
	N	%	N	%	N	%	N	%
Same as area	32	31.4	3	7.1	9	22.0	44	23.8
Highly related	11	10.8	1	2.4	8	19.5	20	10.8
Slightly	15	14.7	2	4.8	7	17.1	24	13.0
Not at all	38	37.3	15	35.7	15	36.6	68	36.8
Did not study an occupational area in high school	6	5.9	21	50.0	2	4.9	29	15.7
TOTAL	102	--	42	--	41	--	185	--

Note: Excluded from Table 8G are: 93 who never had a regular full-time job; 2 Nonhandicapped Academic; 15 with missing Handicap/Nonhandicap or Vocational/Academic classification; and 6 who did not answer the question.

All of the graduates were asked "How satisfied are (were) you with this job? How well did/do you like it?" Table 8I indicates that almost 70 percent of the graduates were satisfied or very satisfied with their first regular full-time job experience. It should be noted that 39 percent of the handicapped academic were dissatisfied or very dissatisfied with their job and about 27 percent of the handicapped vocational had the same views.

TABLE 8I

Overall Satisfaction with First Regular Full-Time Job Experience

Satisfaction Rating	Handicapped Vocational		Handicapped Academic		Nonhandicapped Vocational		Total	
	N	%	N	%	N	%	N	%
Very Satisfied	24	23.8	10	24.4	10	23.8	44	23.9
Satisfied	50	49.5	15	36.6	19	45.2	84	45.7
Dissatisfied	23	22.8	6	14.6	11	26.2	40	21.7
Very dissatisfied	4	4.0	10	24.4	2	4.8	16	8.7
TOTAL	101	--	41	--	42	--	184	--

Question 4. What are the future plans of the graduate?

Career Survey Items 18 and 19 were used to answer question 4.

All of the graduates surveyed were asked "What do you think you will be doing one year from now?" Table 9 shows that 70 percent or more of the handicapped and nonhandicapped vocational graduates planned to work as compared to only 42.6 percent of the handicapped academic graduates. On the other hand, comparing attending postsecondary school, almost 40 percent of the handicapped academic wanted to attend and only 14 percent of the handicapped vocational and 3.9 percent of the nonhandicapped academic wanted to attend. Almost 11 percent of all the graduates were undecided or, did not know what they would be doing a year from now.

TABLE 9

Reported Main Plans Following High School

Main Plans	Handicapped Vocational		Handicapped Academic		Nonhandicapped Vocational		Total	
	N	%	N	%	N	%	N	%
Working	97	75.2	40	42.6	36	70.6	173	63.1
Attending School	18	14.0	37	39.4	2	3.9	57	20.8
In Military Service	1	0.8	0	0.0	0	0.0	1	0.4
Keeping House	1	0.8	7	7.4	5	9.8	13	4.7
Other	1	0.8	0	0.0	0	0.0	1	0.4
Undecided, don't know	11	8.5	10	10.6	8	15.7	29	10.6
TOTAL	129	--	94	--	51	--	274	--

The former students were asked the extent to which their future plans were related to their high school courses. An inspection of Table 9A shows that in most cases, future plans are not related to high school courses. A total of 74.6 percent of handicapped vocational,63.4 percent handicapped academic and 53.9 percent non-handicapped vocational plans were not related. It should be noted that over 46 percent of the handicapped vocational graduate plans were highly related or were in the same area as courses studied as compared to 25.3 percent of the academic handicapped plans.

TABLE 9A

Relationship Between High School Courses and Future Plans

Relatedness of Plans to High School Courses	Handicapped Vocational		Handicapped Academic		Nonhandicapped Vocational		Total	
	N	%	N	%	N	%	N	%
Plans are in same area as courses studied	32	30.8	7	9.3	9	22.0	48	21.8
Plans are highly related	16	15.4	12	16.0	6	14.6	34	15.5
Plans are slightly related	19	18.3	22	29.3	5	12.2	46	20.9
Plans are not at all related	37	35.6	34	45.3	21	51.2	92	41.8
TOTAL	104	--	75	--	41	--	220	--

"Taking all things together, how would you say things are these days?" The results to this question are presented in Table 9B. Over 73 percent of all the graduates responded that they are very or quite happy with current status, 18 percent a little happy and 9 percent responded that they were not too happy. The current satisfaction analysis of the graduates is also discussed in Question 2.

TABLE 9B

Current Satisfaction

Rating of Happiness	Handicapped Vocational		Handicapped Academic		Nonhandicapped Vocational		Total	
	N	%	N	%	N	%	N	%
Very Happy	31	24.6	29	32.2	16	31.4	76	28.5
Quite Happy	55	42.7	40	44.4	24	47.1	119	44.6
A little happy	30	23.8	12	13.3	6	11.8	48	18.0
Not too happy	10	7.9	9	10.0	5	9.8	24	9.0
TOTAL	126	--	90	--	51	--	267	--

Through the use of MRA it is possible to partial out the effect of K-1 independent variables which results in the isolation of the unique contribution to the dependent variable. This unique contribution holds true only for that exact set of k variables included in the equation. The addition or subtraction of variables to this set would result in a redistribution of the explainable variance among the new set of independent variables. The meaningfulness of the partial regression coefficients then are dependent upon the theoretical meaningfulness of the variables included in the equation. With this consideration in mind the variables included in the two sets of equations have been selected.

The significance of the overall multiple R was tested using the F distribution with k and N-K-1 degrees of freedom. This results in a test of the general null hypothesis that all k partial regression coefficients are equal to zero. When the overall F was found to be significant and all partial regression coefficients were not equal to zero, each partial regression coefficient was tested using the F distribution with 1 and N-k-1 degrees of freedom. This results in a test of the hypothesis that $B_k = 0$. Alpha levels of .05 and .01 are used in describing each variable's probable departure from zero relationship.

RESULTS:

The second six equations are similiar, but utilize sex, coop experience and handicapped status as inputs. Table 11 report analyzes seven through twelve. The first six equations were constructed to analyze the effects of sex, vocational program and handicap on the six vocational adjustment outcomes. Table 10 reports the results of these analyzes.

TABLE 10

Effects of Sex, Vocational Program and Handicap on Vocational Adjustment.

Input Variables	Outcome Variables					
	Y_1 Starting Salary	Y_2 Current Salary	Y_3 Job Satisfaction	Y_4 Job Performance	Y_5 Months Working	Y_6 Happiness
X_1 Sex (Male) (N=)	.12[b] (113)	.36* (109)	-.08 (120)	3.17 (26)	.12** (138)	-.79** (161)
X_2 Vocational a Non-Handicapped (N=)	-.07 (40)	-.47* (40)	-.53 (41)	-.16 (11)	-.30** (70)	.05 (90)
X_3 Vocational a Handicapped (N=)	.15 (94)	-.30 (92)	.12 (101)	-2.82 (19)	-.16** (109)	-.17 (126)
X_6 Months since High School	-.013**					
X_7 Months-Current Job		.02**				
X_8 Months-Employee Performance				-.02		
Number of Observations	176	171	184	40	226	267
R^2	.12	.15	.02	.17	.14	.05
Constant [a]	2.68	2.58	.80	32.02	.62	3.38
Mean of Yi	2.44	2.89	.70	32.40	.52	2.85
F=Ratio	5.81**	7.07**	1.34	1.76	11.67**	4.75**

Notes:

a Vocational Non-Handicapped and Vocational Handicapped are expressed in respect to Academic Handicapped which is represented by the Constant.

b Partial regression Coeficient

(N=) Number of cases in the identified dummy variable group.

* Significant of .05 level

** Significant at .01 level

Analysis #1 - is reported in Column One of Table 10 and examines the effect of sex (X_1), and program status (X_2 and X_3) on starting salary(Y_1) with effect of time of entry into the labor force X_6 *partialled out or controlled* statistically. The inclussion of X_6 in the model is necessary to account for the effects of inflation. The first numbers appearing opposite each input (independent) variable is the regression coefficient which is the amount of the outcome (dependent) variable uniquely associated with the input variable. For example, the .12 at the top of Column One indicates that males started for 12 cents an hour more than females with the effects of the other variables removed. However, this 12 cents difference was not enough to be statistically significant and therefore is interpreted as no difference due to sex. The number in parenthesis is the number of males in this particular sub-sample. The statistical significance of the entire equation is tested using the F-ratio which in this case is 5.81 and is significant at the .01 level. Therefore, the proportion of variance explained (R^2=.12) is greater than a chance relationship.

From the results of equation one it can be concluded that most of the differences in starting salary among the population as inferred from the 176 members of this sample are due to times of entry into the labor force (inflation). Males did not differ from females and vocational non-handicapped and handicapped did not differ from academic handicapped in starting salary except by small chance amounts.

Analysis #2 - is reported in Column Two of Table 10 and is an analysis of the effects of sex and program status on current salary with the effects of months on current job (X_7) partialled out. The inclusion of X_7 in the model is necessary to account for possible salary increases due to longevity on the job. The overall F-ratio of 7.07 is significant at the .01 level with 15% of the variance in current salary associated with the four inputs in the model. From an examination of the regression coefficients it can be seen that three of the four inputs possess a significant unique relationship to current salary. Males earned 36 cents an hour more than females with the effect of the other inputs removed. Likewise, vocational non-handicapped earned 47 cents less an hour than academic handicapped. However, when vocational handicapped were compared to academic handicapped the difference (30cents/hour in favor of academic handicapped) was not statistically significant. The sample earned 2 cents an hour more for each month they were employed on their current job.

Based on this data it can be concluded that males earned more than females due to their sex and irrespective of high school program. Furthermore, there were differences amoung the three types of programs under investigation with academic handicapped earning more than vocational non-handicapped but equal to a comparable group of vocational handicapped. In general it appears that to be male and academic handicapped was most advantageous to the population from which the sample was drawn. Perhaps the most surprising outcome of this analysis was the fact that vocational non-handicapped earned least on their current job.

Analysis #3 - is reported in Column Three of Table 10 and examines the effect of sex and program status on job satisfaction. This overall F-ratio of 1.34 is not significant and, therefore, it can be concluded that males were no more or less satisfied with their jobs than were females. Also, graduates of the three high school programs included in the sample did not differ in their job satisfaction.

Analysis #4 - results are reported in Column Four of Table 10. In this analysis, job performance is the outcome of interest with sex and program status the inputs under examination. The months the employee has worked with the employer providing the performance evaluation is included in the model to control for its effect. The sample size for this analysis is much smaller (N=40) than for all other analysis due to the lack of employer response to the survey.

The overall F-ratio is a low 1.76 and is not significant. Therefore, it can be concluded that neither sex nor program differences exist concerning employers' evaluations of the job performance of the population under investigation.

Analysis #5 - appears in Column Five of Table 10 and concerns the relationship between sex and program status as inputs and months working as an outcome. The overall F-ratio of 11.67 is significant and all three input variables contribute significantly to the explained variance. From examination of the regression coefficients it can be seen that males were employed on the average of 12% more times than females while both vocational non-handicapped and handicapped were employed 30% and 16% less time than academic handicapped.

Based on this data it can be concluded that to be male and in the academic handicapped program yielded the best chance of being employed the greatest proportion of the time. A surprising finding here is that being in the non-handicapped vocational program was the greatest liability to employment.

Analysis #6 - is reported in Column Six of Table 10 and examines the effect of sex and program status on current happiness as expressed by the employee. The overall F-ratio of 4.75 is significant; however, all of the explainable variance in happiness is accounted for by the sex variable. With a mean happiness rating of 2.85 on a scale ranging from -1 to +5, males were less happy by .79 points than were females. All three programs did not differ from one another in terms of current happiness.

TABLE 11

Effects of Sex, Coop and Handicap on Vocational Adjustment

Input Variables	Outcome Variables					
	Y_1 Starting Salary	Y_2 Current Salary	Y_3 Job Satisfaction	Y_4 Job Performance	Y_5 Months Working	Y_6 Happiness
X_1 Sex (Male) (N=)	.16[b] (98)	.44* (94)	-.09 (104)	2.81 (24)	.10* (121)	-.79** (141)
X_4 Coop Experience (N=)	.23 (47)	.34 (46)	-.07 (49)	-1.24 (7)	.22** (53)	-.24 (55)
X_5 Handicapped (N=)	.19 (109)	-.21 (107)	-.10 (116)	-2.73 (26)	-.15** (149)	-.14 (182)
X_6 Months since High School	-.014					
X_7 Months Current Job		.02**				
X_8 Months - Employee Performance				-.002		
Number of Observations	152	147	159	37	198	235
R^2	.14	.15	.00	.13	.19	.05
Constant	2.55	2.35	.90	32.99	.50	3.55
Mean of Yi	2.44	2.88	.75	32.62	.51	2.91
F - Ratio	5.87**	12.45**	.07	1.16	15.47**	4.31**

Notes:

b Partial regression coefficient

(N=) Number of cases in the identified dummy variable group

* Significant at .05 level

** Significant at .01 level

Analysis #7 - is reported in Column One of Table 11 and examines the effect of sex (X_1), coop experience (X_4) and handicapped status (X_5) on starting salary (Y_1) with the effect of time of entry into the labor force partialled out. This analysis is similiar to analysis #1 except that coop experience has been added and handicapped status is treated as a single input. The overall F-ratio of 5.87 is significant at this .01 level with 14% of the variance in starting salary explained by the four input variables in the model.

As was true for analysis #1, the only significant input variable is time since high school. Therefore, it can be concluded that difference in starting salary among the population from which this sample was drawn were not due to sex, whether or not the graduate had coop experience or whether or not the graduate had a physical handicap. Differences were due to increases associated with inflation.

Analysis #8 - is reported in Column Two of Table 11 and is an examination of the effects of sex, coop experience and handicapped status on current salary with the effect time on the current job partialled out. The overall F-ratio of 12.45 is significant at the .01 level. From an examination of the regression coefficient it can be seen that most of the differences in current salary are due to either sex or time in the current job. Males earned 44 cents an hour more than females and time on the job was worth 2 cents an hour for each month. These findings are similiar to analysis #2 except that handicapped status was not related to current salary. Also the new input, coop experience, did not result in current salary differences.

Analysis #9 - is reported in Column 3 of Table 11 and examines the effect of sex, coop experience and handicapped status on job satisfaction. The overall F-ratio was not significant and therefore it may be concluded that none of the three inputs in the model had any effect on job satisfactio. This finding is consistent with Analysis #3.

Analysis #10 - is reported in Column 4 of Table 12 and examines the effect of sex, coop experience and handicapped status on job performance with time on the job controlled for statistically. Again, as was true for analysis #4, the overall F-ratio was not significant and no relationship between the inputs and job satisfaction may be assumed.

Analysis #11 - is shown in Column 5 of Table 11. This model investigates the relationship between the three inputs (sex, coop experience and handicapped status) and the proportion of months working after graduation from high school. The overall F-ratio is a relatively large and significant 15.47 with 19% of the variance accounted for and all three regression coefficients making a unique contribution. Males were employed 10% more time than females and coop graduates were employed 25% more time than were non-coop graduates. Handicapped graduates were employed 15% less than the non-handicapped.

The finding of the analysis must be examined and compared carefully to the findings of analysis#5 in order to draw valid conclusions from the data. From an examination of Column 5 in TAble 10, it can be seen that vocational graduates (both handicapped and non-handicapped) worked proportionally less months than did academic handicapped. However, when handicapped status was treated dichotomously and coop

experiemce was added to the model, handicapped status yielded a significant negative regression coefficient (-.15) while coop experience produced a large positive coefficient (.22). The explanation for this appears to be that it is really coop experience. that is the major determinant of proportion of time working. This observation is somewhat supported by the data in Table 4D which shows non-handicapped vocational graduates to be proportionally more represented in coop program and handicapped academic to be least represented.

Analysis #12 - is reported in Column 6 of Table 11 and examines the effect of sex, coop experience and handicapped status on current happiness. The overall F-ratio of 4.31 is significant, however, as was the case in analysis #6, all of the explainable variance is accounted for by the sex input with males less happy than females.

Conclusions

In general, the following conclusions appear to be supported by the data analyzed:

1. Whether or not they were handicapped, males earned greater current salary and were working a greater proportion of time than females. However, females experienced greater current happiness. Sex was unrelated to starting salary, job satisfaction on job performance.
2. Among the three program groups, and without considering coop experience, the vocational non-handicapped appeared to experience the least currentsalary and time working with the academic handicapped experiencing the most of each of these benefits. Program group appears to be unrelated to starting salary, job satisfaction, job performance and current happiness. The relatively positive outcomes associated with the academic handicapped may benefit from further analysis. From an examination of Table 2 it can be seen that this group appears to have more individuals of higher intelligence than does the vocational handicapped and non-handicapped. To the extent that intelligence is related to the outcome examined here, the inclusion of intelligence in the model may account for some of these benefits.
3. When coop experience was considered, it appears to account for much of the benefits of greater time working and reduce the relatively more favorable experiences of

the handicapped for both current salary and time working. Therefore, while being physically handicapped may have been unrelated to all but time working, being in the coop program was beneficial to all, all especially beneficial to the handicapped.

OBJECTIVE I: Comparative Analysis

While the data reported in table 1 through 9 is useful as a general response to Objective I, a further analysis comparing the effects of important input variables is provided here to gain additional insight into the vocational adjustment of the physically handicapped.

The sample for this analysis consists of all individuals in the original sample for whom complete data were available (1972-1976). For the twelve analyses reported here, the number of observations ranged from 37 to 265.

The input (independent) variables selected for study included sex, handicapped status, coop experience, months since high school, months on current job, and months with employer responding to the Employer Performance Survey. The outcome or vocational adjustment (dependent) variables selected for study include starting salary, current salary, job satisfaction, employee performance, proportion of months working and current satisfaction or happiness. A description of each of these variables is provided on the following pages of this section. To gain a complete understanding of the meaning of each variable, the reader is referred to the instruments in the appendix from which each was obtained.

The statistical methodology utilized in this section is Multiple Regression Analysis (MRA) of the type commonally employed by economic researchers to examine the relationship between input and outcomes in the economic sector. The general MRA model employed is of the following form:

$$Y_i = b_o + b_1 X_1 + b_2 X_2 + \ldots + b_k X_k + e$$

where

Y_i = dependent variable (outcomes)

$X_1, X_2, \ldots X_k$ = independent variables (input)

$b_o, b_1, b_2, \ldots b_k$ = partial regression coefficients

e = error term

The particular equation used in the study employed the following independent and dependent variables:

INDEPENDENT VARIABLES (Input)

X_1 = Sex (from Career Survey)
1 = Male
2 = Female

X_2 = Non-Handicapped Vocational (from Educational History Form)
1 = Non-Handicapped (Vocational)
0 = Handicapped (Vocational & Academic)

X_3 = Handicapped Vocational (from Educational History Form)
1 = Handicapped Vocational
0 = Non-Handicapped Vocational and Academic

X_4 = Coop experience in high school (from Educational History Form)
1 = Coop
0 = Non-Coop

X_5 = Handicapped Status (Same as X_2 with 1 and 0 inverted)
1 = Handicapped
0 = Not Handicapped

X_6 = Months since high school - a continuous variable. (Number of months between July 1, 1977 and date of first job from Career Survey)

X_7 = Months, current or last, job is held - a continuous variable. (Number of months working in current or last job from Career Survey)

X_8 = Months working with Employer responding to Employee Performance Survey - a continuous variable. (Part I - Employee Performance Survey)

Dependent Variables (Outcomes)

Y_1 = Starting hourly pay rate on first regular job after high school (Career Survey question #14E).

Y_2 = Hourly pay rate on current or last job (Career Survey question #14E).

Y_3 = Employee's job satisfaction (Career Survey question #14I).
Very Satisfied = +3
Satisfied = +1
Dissatisfied = -1
Very Dissatisfied = -3

Y_4 = Employee's Job Performance (Employee Performance Survey Parts II & III-Total Score).
Above Average = 3
About Average = 2
Below Average = 1
(Range = 13 to 39)

Y_5 = Months working since leaving high school (Career Survey question #12).
Proportion Months Working = $\frac{\text{Full Time \& Part Time}}{\text{Months out of school}}$

Y_6 = Current Happiness (Career Survey question # 19).
Very Happy = +5
Quite Happy = +3
A Little Happy =+1
Not Too Happy = -1

TABLE 12

Employers' attitudes towards the Physically Handicapped as measured by the Employee Performance Survey.

Question	%responding to each category*			Total N
	above average	about average	below average	
Part II				
1. The quality of employee's work	46	49	5	39
2. The quantity of employee's work	40	53	8	38
3. The degree to which the employee possesses specific job-related knowledge important to success on this job	23	72	5	39
4. The degree to which the employee is able to operate the equipment and apparatus used on the job	40	58	3	38
5. The degree to which the employee possesses basic reading, verbal and computational skills	32	55	13	38
Part III				
1. Willingness to accept responsibility	44	49	8	39
2. Punctuality	62	36	3	39
3. Ability to work without supervision	39	54	8	39
4. Willingness to learn and improve	49	49	3	39
5. Cooperation with co-workers	50	47	3	38
6. Cooperation with management	64	33	3	39
7. Compliance with company policies, rules and practices.	56	39	5	39
8. Work attendance	59	36	5	39
Part IV				
1. In the top ¼				17
2. In the top ½ but not among the top ¼				12
3. In the bottom ½ but not among the lowest ¼				5
4. In the lowest ¼				3

*Note: Rounded to nearest % - may not total to 100%. Total N Part IV = 37

TABLE 13

Employers' attitdue towards Vocational vs. Academic Physically Handicapped as measured by the Employee Performance Survey - Part II.

Question	Voc/Aca	N	% responding to each category* above average	about average	below average	X^2/Prob.
1. Quality	Voc	25	44	52	4	.40
	Aca	14	50	43	7	.82
2. Quantity	Voc	24	33	58	8	1.04
	Aca	14	50	43	7	.59
3. Job Knowledge	Voc	25	16	80	4	2.34
	Aca	14	36	57	7	.31
4. Equipment & Apparatus	Voc	24	25	71	4	5.92
	Aca	14	64	36	0	.50
5. Basic Skills	Voc	24	25	58	17	1.61
	Aca	14	43	50	7	.45

TABLE 14

Employers' attitudes towards Vocational vs. Academic Physically Handicapped as measured by the Employee Performance Survey - Part III.

Question	Voc/Aca	N	% responding to each category* above average	about average	below average	X^2/Prob.
1. Responsibilty	Voc	25	40	48	12	1.89
	Aca	14	50	50	0	.39
2. Punctuality	Voc	25	56	40	4	1.23
	Aca	14	71	29	0	.54
3. Without Supervision	Voc	25	32	60	8	1.25
	Aca	14	50	43	7	.53
4. Learn & Improve	Voc	25	44	52	4	1.03
	Aca	14	57	43	0	.06
5. Cooperation-Co-Workers	Voc	24	42	54	4	2.12
	Aca	14	64	36	0	.34
6. Cooperation-Management	Voc	25	56	40	4	2.20
	Aca	14	79	21	0	.34
7. Compliance	Voc	25	44	52	4	5.39
	Aca	14	79	14	7	.067
8. Attendance	Voc	25	44	48	8	6.61
	Aca	14	86	14	0	.036

*Note: Rounded to nearest % - may not total to 100%.

Table 15

Employers' attitudes towards Vocational vs. Academic Physically Handicapped as measured by the Employee Performance Survey - Part IV.

% of Work Group	N/% responding to each category*			
	Vocational		Academic	
	N	%	N	%
Top ¼	9	39	8	57
Top ½ but not ¼	7	30	5	36
Bottom ½ but not ¼	5	22	0	0
Lowest ¼	2	9	1	7
Total	23	100	14	100

Note:

X^2 = 3.906 - Not significant at .05 level-

* Rounded to the nearest %.

OBJECTIVE II: Describe the vocational education programs at the AVTS and BVR Centers for the physically handicapped.

Five area vocational-technical shcools were selected and studied for the purpose of meeting this objective.

SCHOOL A:

This AVTS does not categorize any of their students as special education or handicapped. Physically handicapped students are totally mainstreamed. This vo-tech school does not tell the instructors if a student is "special" or "handicapped". The instructor must ask for information, then the information is available.

The handicapped students are included in the classes and are worked with based upon the student's own ability level. Daily time and activities are reported on a time-sheet type of report. This report is submitted every fifteen days. The program is based upon individualized instruction. The grade is based upon the ability level of the individual.

All handicapped students are a part of the co-op program. There are no separations made. The school tries to encourage employers to seek references and information from the school when they hire graduates. This would include some idea as to "ability level", not "handicap".

School A has a learning center equipped with audio-visual equipment, resource material, video tapes, slides, film strips, and career information. A JEVS evaluation system is accessible;

however, due to the fact that there is only one counselor employed by the shcool, it is impossible to operate the system presently.

SCHOOL B:

This AVTS has no entry requirements. No one knows who is handicapped except the pupil personnel services staff.

This AVTS operates a program for trainable mentally retarded students including those multiply handicapped, which fits into their overall philosophy of educating all.

The facility is neat, modern and well-organized.

Handicapped students are under the supervision of the Intermediate Unit and are integrated directly into the regular class.

The courses are divided into units, modules, and tasks. For example: Unit - exhaust system, Module - muffler, Tasks - dismantle, replace, repair, clamp. The task sheets are behavioral objectives which are to be satisfied. When the tasks are completed to the satisfaction of the instructor, a computer records the successes in each task, unit, and module. The student then moves on.

Before this school opened, extensive in-service sessions were held to show the instructors how to deal with handicapped students.

School B allows area-to-area transfers all through the year for all students. The school feels this is not detrimental because of the module learning approach.

No extra personnel are present in the school for the purpose of offering special services for the handicapped which is a limiting factor.

SCHOOL C:

School C is unique in this report in that they operate a second shift program for the handicapped. Some students under the present set-up have moved from the second shift program into the regular program. "This school is not main-streaming oriented at present; however, it should be noted that their federally funded second shift program (another concept in educating the handicapped) is well organized and apparently efficient."

The supportive services offered to the handicapped student are as follows: Two certified special education teachers, four one-half time teachers in the vocational areas, one counselor who is also the disciplinarian, and the diversified co-op man. The success of this program rests upon this co-op man who evaluates student progress, contacts industry and fits "the student" with "the job".

SCHOOL D:

This AVTS does not believe in "making a big deal" out of informing instructors about who is special or handicapped. The school does, however, consider very strongly individual instructor attitude in placing handicapped students in the area. "Some teachers just don't work well with these kinds of students", is a comment that was made by a counselor.

The co-op team at School D is very well organized and strong. Eight to ten people work on the program and it is arranged so no two people ever knock on the same door.

A work-study program is also available to the handicapped.

Financial support for training of the handicapped comes from the Intermediate Unit, BVR, and work study funds.

Supportive services are extensive at this institution. Video tapes, computer assisted instruction, remedial math programs, and many programs in the affective domain are offered to the handicapped at this school. The programs are carried out by a member of the three-person guidance department staff.

SCHOOL E:

The vo-tech school's handling of handicapped students revolves mainly around their Resource Person for Special Needs Students. The school also offers many evening programs for the multiply handicapped and visually handicapped supporting their philosophy of "Education for All". The Resource Person for Special Needs Students' job is one of great variety. This person works directly with instructors on curriculum, work adjustment, and social adjustment. This person works closely with the Cooperative Education Coordinator in explaining how the handicapped fit into the Co-op Program. Placement of handicapped students in jobs is this person's primary goal.

Presently this position is federally funded and every effort is being made to localize the support.

School E also has federally and locally funded remedial reading and math programs for handicapped students. The persons who hold these two positions work directly with vocational instructors to determine who in the student population is in need of remedial instruction. Individual prescription education is realized through this supportive staff-instructor communication. The Resource Person for Special Needs Students also works very closely with these persons in the prescriptive learning process for the handicapped.

The personnel of this supportive staff (mentioned above) operate extremely well in the totally mainstreamed environment that exists within this school.

Other special services for the handicapped at this school include three teacher aids in areas of high handicapped population, MIND programs in remedial math and reading, and various audio-visual screening and instructional resources.

CONCLUSION: Some schools are high on personnel, others on equipment, and still others on programming to meet needs of handicapped students. The main point here is "that whatever is being done to make education appropriate for all is a step in the right direction".

OBJECTIVE III: Describe the parental attitudes towards the vocational programs.

Responses to the Parent Follow-up survey instrument were categorized. Those responses and their subsequent attitudinal implications and conclusions are seen below.

1. What did you like about your son's/daughter's secondary education program?

   Of the 120 parents that responded to this item, 55% liked the durriculum or some aspect of the curriculum, 20% said they generally liked the program, 9% liked the staff, and 16% did not respond.

2. What did you dislike about your son's/daughter's secondary education program?

   13% of those responding to this question disliked the curriculum, 8% disliked the staff, 2% felt their children were discriminated against, 1% disliked the program generally, 1% disliked the fact that their "Vo-Tech School" had a poor image, 42.5% did not express any specific dislike, and 32.5% did not respond.

3. a. Were you ever informed about the educational or vocational programs available to your son/daughter?

   53% indicated they had been informed, 36% said they were not informed, and 11% did not respond to this question.

b. Who informed you?

Out of the 56% who said they had been informed, 21% were informed by a counselor, 16% by a teacher, 19% by an outside agency, and 44% did not respond to this pare of question 3.

4. Do you feel your son/daughter had enough information for selecting a senior high program in college prep or vocational education?

   Of the 120 responses, 45% said yes and 40% said no. 15% did not respond.

5. Do you feel your son/daughter's vocational training in senior high school was adequate for today's job market?

   "Yes" responses to this question were 33%. "No" responses were 50%. 17% did not respond.

6. Is your son/daughter now self supportive?

   46% said yes, 42% answered no, and 12% did not respond.

7. Do you feel there is a need for follow-up services to help your son/daughter to advance and obtain a better job?

   43% of thos responding felt there was a need for follow-up services, 35% felt there was not a need for these services, and 22% did not respond to this survey item.

OBJECTIVE IV - Describe the employer attitudes towards the physically handicapped adults.

An Employer Survey was used to gather responses to answer Objective IV. A total of 70 employers completed the survey of which 45 of them actually had physically handicapped adults working on their staff. A total of 25 employers returned their completed survey indicating that they did not employ any physically handicapped workers. Of the 45 employers who completed the survey items based upon their assessment of physically handicapped employees, the following items indicate the results of the survey.

ITEM 1. Was the employee's job re-engineered? Yes ( ) No ( ) To what extent?

Of the 45 employers who responded to this item, 96 per cent felt the employee's job did not have to be reengineered, 4 per cent felt the job had to be reengineered. The reasons indicated for reengineering only 2 jobs were (adjusting the rate of pay) and (closer supervision of the individual in question).

ITEM 2. What relationship is there between the disability and the job employee is performing?

Of the 45 employers who responded to this item, 91 per cent felt there was no relationship between the disability and the job the employee is performing. Of the 7 per cent who felt there was a marked difference between the disability and job employee is performing, only 2 per cent felt that the condition could not be remedied after initial training period.

ITEM 3. Would you consider employing another physically handicapped person? Yes ( ) No ( ). If yes, what kind of job? _____ If no, why not?

About 93 per cent of the 45 employers indicated that they would hire another handicapped person. Only 3 employers or 70 per cent indicated they would not consider hiring additional physically handicapped people. Those employers indicating that they would hire another handicapped person made it clear that all of their jobs are open to handicapped employees.

ITEM 4. Have you had previous experience with the physically handicapped other than this employee? Yes ( ) No ( ) What?

Approximately 58 per cent of the employers had previous experience with physically handicapped other than this employee. Approximately 42 per cent of the employers indicated that this was their first experience in dealing with physically handicapped employees.

ITEM 5. Do you employ other handicapped workers? Yes ( ) No ( ) Number _____.

Of the 45 employers responding to Item 5, 53 per cent employ other handicapped workers, 47 per cent of the employers do not employ other handicapped workers.

ITEM 6. How did you find this person for employment ?

Of the 45 respondents, 31 percent of the employers used employment agencies, 29 percent used the school, 27 percent located located employees through friends and 13 percent used the newspaper.

ITEM 7. Do you feel the physically handicapped individual has had a problem socially adjusting within the company. Yes ( ) No ( ). If yes, what steps were taken to help with the problem?

A total of 88 percent of the employers indicated the handicapped has not had any problem socially adjusting within the company, and various attempts renging from increasing supervisory tolerance levels seeking psychological assistance for the employee were tried. All attempts seemed to work out favorably in solving the adjustment problem.

ITEM 8. Did you make any architectural changes to accommodate the physically handicapped employee? Yes ( ) No ( ). If yes, what changes were mads?

Approximately 98 percent of the employers did not have to make any architectural changes to accommodate the physically handicapped employees, and of the 2 percent who made architectural changes, those changes came in the form of a ramp in the front of the building and hand-rails in the restrooms.

OBJECTIVE IV: Describe the employer attitudes towards the physically handicapped graduate.

The data for this objective were gathered using the Employer Performance Survey which was developed by Pucel (1973) in the Department of Industrial Education at the University of Minnesota and used with permission. A copy of the Employer Performance Survey appears in the appendix. Due to the small number of employers responding to the survey, only 39 cases yielded complete data for the total analysis.

OVERALL ANALYSIS:

The primary analysis undertaken to fulfill this objective was a simple description of the percent responding to each of the categories (above average, about average and below average) for parts II and III and a tally of the number responding to the part IV alternatives. This description appears in table 12.

For part II and III, it can be seen from the table that few of the handicapped were judged to be below average with a low of 3% and a high of 13% in this category. Comparing the questions in part II, it appears the handicapped excel less in job related knowledge and basic skills than in quality and quantity of work and use of equipment and apparatus. The response to the equipment and apparatus question is somewhat surprising since a physical handicap is more likely to be a limiting factor in this area and not a problem in the job knowledge and basic skills area. For the part III questions, the responses are all relatively favorable with little differences

among the eight items. Item 3 (the ability to work without supervision) appears to be the least favorable and this feeling among employers of the physically handicapped is understandable.

The part IV responses are reported as the number of handicapped employees judged to be in each ¼th of a distribution compared to other workers in the same work group. As can be seen from the table, 37 employers responded to part IV with 17 employees judged to be in the top ¼ and a total of 29 in the top ½. Whether or not this comparison with fellow employees is a true indication of the handicapped employees overall effectiveness, it is clear that the employers responding to the survey held them in high regard.

VOCATIONAL VS. ACADEMIC:

In order to gain a greater insight into the question of employer attitudes towards the physically handicapped and to investigate possible program differences, employer responses were compared for vocational vs. academic graduate. These responses were tested for differences using a chi square (X^2) analysis which is reported in tables 13, 14, and 15. For most comparisons, there were 25 vocational and 14 academic physically handicapped graduates available for study.

Table 13 reports the part II analysis. As can be seen from the table, for all five questions the academic graduates placed a greater % in the above average category; however, only for question 4 (equipment and apparatus) are the differences statistically significant at the .05 level. Thus finding that the academic graduates performed better on equipment and apparatus

is surprising in light of the training provided in this area for the vocational, but not the academic graduates.

Table 14 reports the part III comparisons. Again in this part of the questionnaire the academic graduates produced a greater proportion of above average ratings than did the vocational graduates. However, only in item 8 (attendance) does this difference reach statistical significance at the .05 level (item 7 is a close .067). All of the items in part III are of an attitudinal or affective nature, but attendance is probably the most concrete and object measure of the eight. For whatever reason, the academic graduates were perceived to be better in this very important area than were vocational graduates.

Table 15 reports the part IV analysis. Although the academic graduates placed 93% of their numbers in the top two categories as opposed to 69% for the vocational graduates, the differences were not large enough to be statistically significant at the .05 level.

ADDITIONAL ANALYSES:

Several additional analyses were conducted with the data that are not presented here in table form. In one of these analyses, handicapped and non-handicapped vocational graduates were compared on parts II, III and IV of the Employer Performance Survey. In all 14 comparisons, no statistically significant differences were found. Another analysis was designed to compare the employers responses to parts II and III of the Employer Performance Survey with the part IV categories. If employers are consistant in their opinions this relationship should be

high. This analysis was carried out by correlating the sum of the 13 items in parts II and III with the 4 category scale of part IV. The correlations produced were .84 for vocational handicapped, .75 for academic handicapped, and .68 for non-handicapped vocational graduates. From the relatively high degree of correlation uncovered, it appears that employers are consistant in their opinions regarding the physically handicapped.

CONCLUSIONS:

In drawing conclusion concerning the employers' attitudes towards the physically handicapped it must be remembered that the data used was obtained from a rather small volunteer sample of approximately 40 individuals. Since those responding appeared to hold highly favorable attitudes towards the physically handicapped it is conceivable that those not responding held somewhat less favorable attitudes. Even this speculation, however, is simple conjecture for which no data is available.

Within the limitations of the sample, the following conclusions appear to be supported by the data:

1. The employers responding to the Employee Performance survey held highly favorable attitudes towards their physically handicapped employees.
2. When vocational and academic handicapped graduates were compared on employee performance, the academic graduates appeared to elicit slightly more favorable attitudes especially in the areas of equipment and apparatus, and attendance.

3. When vocational handicapped and non-handicapped were compared on employee performance, no differences were observed.
4. Employers appear to be consistant in their opinions concerning employee performance as obtained through the two methods of measurement utilized in the Employee Performance Survey.

OBJECTIVE V: Identify vocational programs that would be beneficial to the employability of the physically handicapped.

Based upon input from the schools surveyed, the following major vocational programs are beneficial to the employability of physically handicapped individuals:

1. Business
2. Data Processing
3. Distributive Education
4. Electronics
5. Food Services
6. Communications

OBJECTIVE VI: Identify types of special services the physically handicapped might need to succeed in the regular vocational programs at the public school.

To answer this objective, the following categories of special services for the physically handicapped were compiled from the schools studied: Special Programs, Special Equipment, In-school Staff, Intermediate Unit Services, and Outside Agency Services.

SPECIAL PROGRAMS:

A program for the visually handicapped was observed. Courses such as data processing, personal grooming, food preparation, and communications were offered. These courses were chosen primarily due to their non-hazardous nature and because of their dual purposes, i.e. vocational as well as avocational possibilities.

Also a program for the multiply handicapped was seen. This program had mentally handicapped individuals in it which were not to be considered in this study; however, the program contained such a great degree of "humanism", it was certainly worth viewing. A "humanistic" philosophy is a must for the operation of any program for the handicapped.

SPECIAL EQUIPMENT:

Various types of equipment and devices were observed that aided their programs. Magnifying glasses, braille instructions, tape recorders, large print books, handrails,

special machine guards, ramps, handicapped toilet facilities, special stools, wheelchairs with writing boards, and coordination developing devices were in use and seemed to facilitate the handicapped person's learning experiences.

IN-SCHOOL STAFF:

The most important staff member in educating the handicapped was the "humanistically inclined" instructor. Also, instructor aids in "mainstreamed" learning environments were vital and helped to maintain a good attitude toward the handicapped individuals in the classroom on the part of the instructor.

In a vocational-technical school environment, the "Resource Person for the Handicapped" offered many advantages because he or she was trained in the special needs of the handicapped and was able to deal with educational, social, cultural, and physical disabilities of handicapped individuals. This position was found to be the most effective, inexpensive, and credible way to mainstream all types of handicapped individuals.

INTERMEDIATE UNIT SERVICES:

The Intermediate Unit services that were observed included: Diagnostic Evaluation and rehabilitative programs for those with speech, hearing, vision, and orthopedic handicaps; diagnostic evaluation and rehabilitative programs for socially maladjusted, emotionally maladjusted, and

mentally retarded individuals. Psychologists and social worker staff positions were also observed as being existent in the Intermediate Unit structures.

OUTSIDE AGENCY SERVICES:

Various outside agencies were used by some of the schools studied. They were: The Pennsylvania Bureau of Vocational Rehabilitation, County Mental Health Agencies, the Child Welfare Agency, Pennsylvania Bureau of Employment Security, Pennsylvania Department of Public Welfare, and various local Human Services Agencies.

These agencies performed evaluative, referral, therapy, and counseling types of services for the handicapped.